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THE HISTORY OF GARDEN VEGETABLES.

BY E. L. STURTEVANT.

(Continued from page 646.)

SKIRRET. *Sium sisarum* L.

THIS plant seems to have been unknown to the ancients; certainly no mention can be found of an umbellifer with grouped and divergent roots, the peculiarity of the Skirret alone among European cultivated plants of this order. In the sixteenth century the name *siser* was applied to the carrot as well as to the Skirret, as by Camerarius¹ who describes *siser*, the *sisaron* of the Greeks, as a correct Skirret, and under *siser alterum*, Italian *carota bianca*, German *gierlin*, Spanish *chirivias*, French *chervy* or *girolles* or *carottes blanche*, as a carrot, and other illustrations of this period and earlier might be given. Fuchsius² in

¹ Camerarius. *Epitome*, 1586, 226, 227.

² Fuchsius. *De Stirp.*, 1542, 752.

1542 figures the *Skirret*, as does also Ruellius³ in 1550, Tragus⁴ in 1552, and many others after this time, and it was well known in Europe as a plant of culture at this period. It perhaps came, says Decandolle,⁵ from Siberia to Russia, and from thence into Germany. It is not named by Turner⁶ in 1538, but is in 1551,⁷ and in 1570 the *Adversaria* gives the English name as *scyrret*. It was in American gardens in 1775.⁸ There are no varieties described.

The modern names of the *Skirret* are: In France, *chervis*, *chirouis*, *giroles*; in Germany, *Zuckerwurzel*; in Flanders, *suikerwortel*; in Denmark, *sukkerrod*; in Italy, *sisaro*; in Spain, *chirivia tudesca*; in Portugal, *chirivia*;⁹ in Scotland, *crummock*;¹⁰ in India, *cheena aloo*;¹¹ in Japan, *muskago nisin sjakuna*.¹²

The ancient names, as given by J. Bauhin,¹³ are: For Germany, *gierlin*, *gierlen*, *geyerlein*, *gorlin*, *gerlin*, *klingei*, *rublin*, *garten rapunzel*, *zam rapunzel*, *klein morellen*, *klingel mohren*, *girgele*, *girgeln*, and, above all others, *zucker wurtzel*; in Belgian, *suyster wortelen*, *serillen*; in French, *esthervis*, *chervits*, *chervy*, *gyroles*; in Italy, *sisaro*; in Spain, *chirivias*, *chirivias*, *chirimas*; in English, *scyrret*.

SNAILS. *Medicago scutellata* All.

This plant is not edible, but like the caterpillar-plant is grown on account of the singular shape of its seed-vessels. It was in Belgian and German gardens preceding 1616,¹⁴ and in American gardens in 1863 or before.¹⁵

Called in France, *limacon*; in Germany, *schmirkel-schnecke*, *schneckenklee*; in Spain, *caracol*.¹⁶

³ Ruellius. Diosc., 1550, 239.

⁴ Tragus. De Stirp., 1552, 911.

⁵ Decandolle. Orig. Des Pl. Cult., 31.

⁶ Turner. Libellus, 1538.

⁷ Bauhin. Pin., 1623, 155.

⁸ Romans. Nat. Hist. of Fla., I., 115.

⁹ Vilmorin. Les Pl. Pot., 87.

¹⁰ McIntosh. Book of the Gard., II., 229.

¹¹ Speede. Ind. Handbook of Gard.

¹² Thunberg. Jap., 118.

¹³ J. Bauhin. Hist., 1651, III., pt. 2, 154.

¹⁴ Dodonæus. Pempt., 1616, 575.

¹⁵ Burr. Field and Gard. Veg., 1863, 398.

¹⁶ Vilmorin. Les Pl. Pot., 321.

SOJA BEAN. *Soja hispida* Moench.

This leguminous plant, although popular in eastern countries, can scarcely be expected to obtain a foot-hold in European or American gardens. According to Bretschneider,¹⁷ a Chinese writing of 163-85 B.C. records that Shen nung, 2800 B.C., sowed the five cereals, and another writing of A.D. 127-200 explains that these five cereals were rice, wheat, *Panicum italicum*, *P. miliaceum*, and the Soja. The same are also mentioned in the "Classics." The use of this bean as a vegetable is also recorded in authors of the fifth, fourteenth, and sixteenth centuries. The first mention of Soja that I note is by Kæmpfer,¹⁸ who was in Japan in 1690, and in his account of his travels he gives considerable space to this plant. It also seems to be mentioned by Ray¹⁹ in 1704. It is much cultivated in China and Cochin-china.²⁰ There are a large number of varieties,—“as many as you have of beans,” as a Japanese friend informed me. Seed was brought from Japan to America by the Perry Expedition on its return, and were distributed from the U. S. Patent Office²¹ in 1854. I have since then received some of the seed from the South under the name of the cow-pea. In France the seed received distribution in 1855.²² In 1869 Martens²³ describes thirty-two varieties.

The *Soja Bean* is called in France, *soja*, *pois oleagineux de la Chine*; in Germany, *soja-bohne*; ²⁴ in Japan, *daidsu* or *mame*, the send *miso*; ²⁵ in China, *yeou-teou*.²²

In some of its varieties this bean may be found useful for forage purposes, or perhaps for field culture.

SORREL. *Rumex* sp.

The Sorrels are much used in many parts of Europe, but they do not seem to be popular in English-speaking countries. A

¹⁷ Bretschneider. Bot. Sin., 75, 78, 52, 59.

¹⁸ Kæmpfer. Amoen., 1712.

¹⁹ Ray. Hist. Suppl., 1704, 438.

²⁰ Loureiro. Fl. Cochinch., 441.

²¹ U. S. Pat. Of. Rept., 1854, XV.

²² Paillieux. Le Soja, 1881, 5.

²³ Martens. Die Gartenbohne, 1869, 103-5.

²⁴ Vilmorin. Les Pl. Pot., 549.

²⁵ Thunberg. Jap., 282.

number of species have been brought under culture, but the varieties referred to *Rumex acetosa*, *R. montanus*, and *R. scutatus* are now the only ones described by Vilmorin as under European vegetables.

Rumex acetosa L.

This species is very extensively used in France, and has four varieties.²⁶ It was formerly much cultivated in England for its leaves, which were used as spinach or in salads, and are agreeably acid. It is mentioned in nearly all the earlier botanies, and by Gerarde²⁷ in 1597, as under culture in England, who also figures the blistered variety. It is spoken of in nearly all the later writers on garden subjects, and was in common use in 1807,²⁸ but in 1874 is said to have been for many years entirely discarded, the French Sorrel having usurped its place.²⁹ The broad-leaved form was in American gardens in 1806.³⁰ This plant is in great favor with the northern natives, as the Laplanders,³¹ the Hebrideans,³² etc., and in its varieties is largely cultivated.

The common sorrel, sorrel, or green sauce³³ is called in France, *oseille commune*, *aigrette*, *oseille longue*, *surelle*, *surette*, *vinette*; in Germany, *Sauerampfer*, *Sauerling*; in Flanders and Holland, *zuring*; in Denmark, *almindelig syre*; in Italy, *acetosa*, *acetina*, *erba perpetua*; in Spain, *acedera*, *agrella*; in Portugal, *azedas*;²⁶ in Greece, *xunethra*, *zinitra*, *oxalithi*;³⁴ in the Mauritius, *oseille*;³⁵ in India, *oovlaeeta chooka*.³⁶

Rumex scutatus L.

This species is mentioned in England by Gerarde²⁷ in 1597, but he does not indicate its general cultivation; he calls it *oxalis*

²⁶ Vilmorin. Les Pl. Pot., 393.

²⁷ Gerarde. Herbal., 1597, 319.

²⁸ Miller's Dict., 1807.

²⁹ Booth. Treas. of Bot., 1874.

³⁰ McMahon. Am. Gard. Kal., 1806, 320.

³¹ Lightfoot. Fl. Scot., I., 191.

³² Jour. of Agr., II., 379.

³³ Johnson. Useful Pl., 222.

³⁴ Pickering. Ch. Hist., 365.

³⁵ Bojer. Hort. Maur., 272.

³⁶ Speede. Ind. Handb. of Gard., 154.

franca seu romana. It is more acid than the preceding species, and has displaced it largely from English culture. It is mentioned by many of the early botanists, and is under extensive culture in continental Europe.³⁷ It was in American gardens in 1806,³⁰ but is now scarcely cultivated, as would seem from its absence from our seed lists.

French sorrel,³⁸ *round-leaved sorrel*,³⁹ *buckler-shaped sorrel*,²⁹ or *Roman sorrel*³⁷ is called in France, *oseille ronde*, *petite oseille*; in Germany, *romischer sauerampfer*; in Italy, *acetosa romana*, *acetosa tonda*.²⁶

Rumex montanus Desf.

This species occurs in French gardens under two varieties, the green-leaved and the crimped-leaved. The wild form, *R. arifolius* L., is often met with in France. In 1863 Burr⁴⁰ describes it among American garden esculents. In India it is said by Firminger⁴¹ to be an excellent ingredient to use abundantly in soups, and to serve to impart a peculiarly fine flavor to omelettes.

Mountain sorrel,⁴⁰ or *maiden sorrel*,³⁸ is called in France, *oseille vierge*, *oseille sterile*; in Italy, *acetosa vergine*.²⁶

Rumex alpinus L.

A species sometimes grown in France, but which does not appear to have entered American culture. It was grown in England by Gerard in 1597 for use in "physicke," and is described as cultivated there in Miller's Dictionary, 1807. It is eaten as a herb in China.⁴²

*Pyrenean sorrel*³⁸ is called in France, *oseille des Alpes*, *oseille des Pyrnees*.

Rumex pulcher L.

This species is said to be planted in gardens in France for use as a pot-herb, but the leaves to become very hard in summer.⁴³ It is, however, scarcely to be considered a garden plant.

³⁷ McIntosh. Book of the Gard., II., 139.

³⁸ Vilmorin. The Veg. Gard., 526.

³⁹ Mawe. Gard., 1778.

⁴⁰ Burr. Field and Gard. Veg., 308.

⁴¹ Firminger. Gard. in Ind., 142.

⁴² Smith. Mat. Med. of China, 87.

⁴³ Flore Nat. et Econ., etc., Pt. II., p. 497.

Rumex sanguineus L.

This weed of waste and cultivated grounds of America is mentioned, under the name Bloodwort, by Josselyn,⁴⁴ about the middle of the seventeenth century, as introduced. As Gerarde⁴⁵ in 1630 says it was sown in his time for a pot-herb in most gardens, and as Ray⁴⁶ in 1686 also says it was planted in gardens as a vegetable, we may believe that it was in former use in colonial gardens in Massachusetts. Its use is as a spinage, and for this purpose the leaves of the wild plant are occasionally collected at the present time.

Bloody-veined dock is the name under which the wild plant is now known.

SOUTHERNWOOD. *Artemisia abrotanum* L.

This aromatic plant is inconsiderably cultivated for its agreeable taste and tonic properties.⁴⁷ To some people its fragrance is very grateful. It is cultivated in most parts of China for the use of the young shoots made into cakes with meal.⁴⁸ It was apparently known to the ancients, but the references are not as clear as might be. It was described as under cultivation by the herbalists of the sixteenth century, and Turner⁴⁹ in 1538 gives its English name as *Suthernwoode*. In 1859 Gray⁵⁰ says it is found in some American gardens.

Southernwood, called in Anglo-Saxon, *sæthrenewudu* or *suthernwude*,⁵¹ is called in France, *aurone*, *aurone des jardins*, *aurone male*, *citronelle*, *garde-robe*, *herbe royale*, *vrogne*; in Denmark, *ambra*; in Italy, *abrotano*, *abrotino*; in Greece, *pikrothanos*; in Egypt, *semsæk*, or *msæk*, or *meskeh*; ⁵¹ in China, *yin-chin-hau*.⁴⁸

SPINAGE. *Spinacea oleracea* L.

This plant was unknown to the ancient Greeks and Romans, but appears to have been early used by the Arabs, and by the

⁴⁴ Josselyn. Rar., 114.

⁴⁵ Gerarde. Herb., 1633, 390.

⁴⁶ Ray. Hist., 1686, 174.

⁴⁷ Decaisne & Naudin. Man., IV., 239; Vilmorin. Les Pl. Pot., 28.

⁴⁸ Smith. Mat. Med. of China, 25.

⁴⁹ Turner. Libellus, 1538.

⁵⁰ Gray. Man. of Bot., 1859, 228.

⁵¹ Pickering. Ch. Hist., 258.

Moors carried to Spain, from which it gradually spread to the rest of Europe.⁵² The first notice I find is its occurrence in China in the seventh or eighth century,⁵³ and one of its names is *Po-ssv-ts'ao*, Persian herb.⁵⁴ In the Nabathean agriculture in Spain, in the twelfth century, it is called by *Ibn-al-arwan*, the prince of vegetables.⁵⁵ Albertus Magnus,⁵⁶ who lived in Bavaria in the thirteenth century, describes the *spinachia* with spiny seed. Ammonius,⁵⁷ a Bavarian physician writing in 1539, says it was mentioned by Avicenna, an Arab author born in Persia in 981, and is perhaps the *aspenach* of Serapio, another Arab author of the same period. In 1536 Ruellius says it was called *spinacia* in France, and *spinachia* by the modern Greeks. In England it is mentioned by Turner⁵⁸ in 1538, who calls it *Atriplex hispaniensis* of some, *spinachia* of the English. It was new in Italy in 1558, according to Matthiolus.⁵⁹ We thus find its presence universal in Europe in the early part of the sixteenth century. Indeed its use has become for some time so extended as to supplant many other vegetables formerly grown as pot herbs.

Two races are now known in our gardens; the one with prickly seed, and the other with smooth seed. These have been described as species.

Spinacia spinosa Moench.

Spinachia. Alb. Mag., 13th Cent., Jessen Ed., 563; Fuchsius, 1542, 666, cum ic; Dod., 1616, 619, cum ic.

Binetsch, Spinat, Spinacia. Roszlin, 1550, cum ic.

Olsus hispanicus. Trag., 1552, 325, cum ic.

Spinacia. Matth., 1570, 342, cum ic; Lob. Obs., 1576, 129, cum ic., 1591; ic., 1591, I., 257; Lugd., 1587, 544, cum ic.; Ger., 1597, 260, cum ic.

⁵² Targioni-Tozzetti. Hort. Trans., 1854, 148.

⁵³ Bretschneider. Bot. Sin., 79.

⁵⁴ Bretschneider. On the Study, etc., 16.

⁵⁵ Heuze. Les Pl. Alim., I., IV.

⁵⁶ Albertus Magnus. De Veg., Jessen Ed., 1867, 563.

⁵⁷ Ammonius. Med. Herb., 1539, 323.

⁵⁸ Turner. Libellus, 1538.

⁵⁹ Matthiolus. Com., 1558, 246.

Spanachum. Cam. Epit., 1586, 245, cum ic.

Lapathum hortense alterum, seu spinacia semine spinoso. Bauh.

Phytopin., 1596, 183.

Spinachia mas. J. Bauhin, 1651, II., 964, cum ic.

Spinacia oleracea L. var. A. Lin. Sp., 2d ed., 1456.

Epinard d'Angleterre. Vilm., 1883, 203.

Large Prickly or Winter Spinage. Vil., 1885, 533.

Spinacia inermis Moench.

Spinachia nobilis. Tragus, 1552, 324.

Lapathum hortense alterum spinacia, semine non spinoso. Bauh.

Phytopin., 1596, 184.

Spinacia II. Ger., 1597, 260.

Spinachia femina. J. Bauh., 1651, II., 964.

Spinachia semine non pungente, folio majore rotundiore. Ray, 1686, 162; Chabr., 1677, 303 cum ic.

Spinacia glabra. Mill. Dict., 1733.

Spinacia oleracea, L. var. B. Lin. Sp., 1762, 1456.

Epinards a graine ronde. Vil., 1883, 204.

Round-Seeded Spinage. Vil., 1885, 534.

Spinage was in American gardens in 1806.⁶⁰ There is but one variety of the prickly-seeded described by Vilmorin,⁶¹ and five of the smooth-seeded form.

Spinage is called in France, *epinard*; in Germany, *spinat*; in Flanders and Holland, *spinazie*; in Denmark, *spinat*; in Italy, *spinaccio*; in Spain, *espinacia*; in Portugal, *espinafre*;⁶¹ in Norway, *spinat*.⁶²

In Arab, *sebanakh*,⁶³ *tæktera*,⁶⁴ *ispanaj*,⁶⁵ *isfanadsch*,⁶⁶ *esbanach*; in China, *po-ling*, *po-ts'ai*, *po-ssv-ts'ao*;⁶⁷ in Hindustani, *sag-paluk*; in Persia, *ispanaj*.⁶⁵

⁶⁰ McMahon. Am. Gard. Kal., 1806.

⁶¹ Vilmorin. Les Pl. Pot., 202.

⁶² Schubeler. Culturpfl., 80.

⁶³ Delile. Fl. Æg. II.

⁶⁴ Forskal. Fl. Æg.—Arab., XCIII.

⁶⁵ Birdwood. Veg. Prod. of Bomb., 69, 177.

⁶⁶ Decandolle. Geog. Bot., 846.

⁶⁷ Bretschneider, l. c.

SQUASH, PUMPKIN, AND GOURD.

The Squash.

The word squash seems to have been derived from the American aborigines, and in particular from those tribes occupying the northeastern Atlantic coast, and seems to have been originally applied to the summer squash, as by Wood,⁶⁸ when he says, "In summer, when their corn is spent, *isquotusquashes* is their best bread; a fruit much like a pumpkin." Roger Williams⁶⁹ writes the word "*Askutasquash*,—their vine apples,—which the English, from them call *squashes*; about the bigness of apples of several colors." Josselyn⁷⁰ gives also a new form to the word, writing "*Squashes*, but more truly *squoutersquashes*, a kind of mellon or rather gourd; for they sometimes degenerate into gourds. Some of these are green; some yellow; some longish, like a gourd; others round, like an apple; all of them pleasant food, boyled and buttered, and seasoned with spice. But the yellow squash—called an apple squash (because like an apple), and about the bigness of a pome water—is the best kind." This apple squash, by name at least, as also by the description so far as applicable, is even now known to culture, but is rarely grown on account of its small size.⁷¹ Van der Donck, after speaking of the pumpkins of New Netherlands (1642–53), adds, "The natives have another species of this vegetable peculiar to themselves, called by our people *quaasiens*, a name derived from the aborigines, as the plant was not known to us before our intercourse with them. It is a delightful fruit, as well to the eye on account of its fine variety of colors, as to the mouth for its agreeable taste. . . . It is gathered early in summer, and when it is planted in the middle of April, the fruit is fit for eating by the first of June. They do not wait for it to ripen before making use of the fruit, but only until it has attained a certain size. They gather the squashes, and immediately place them on the fire without any further trouble."⁷² In 1683 Worlidge⁷³ uses the

⁶⁸ Wood. New Eng. Prosp., Pt. II., c. 6.

⁶⁹ R. Williams. Key, etc., 222.

⁷⁰ Josselyn. Rar., p. 89.

⁷¹ Burr. Field and Gard. Veg., 1863, 207.

⁷² Quoted from A. Gray, *Am. Jour. of Sci.*, May, 1883, p. 377.

⁷³ *Systema Horticulturæ*, by J. W. Gent, p. 211.

word squash, saying, "There are lesser sorts of them [pompeons] that are lately brought into request that are called *squashes*, the edible fruit whereof, boyl'd and serv'd up with powdered beef, is esteemed a good sawce," and Kalm⁷⁴ in his Travels says distinctly that "The squashes of the Indians, which now are cultivated by Europeans, belong to those kind of gourds which ripen before any other." These squashes of New England were apparently called *sitroules* by Champlain⁷⁵ in 1605, who describes them "as big as the fist." Lahontan⁷⁶ in 1703 calls the squashes of southern Canada *citrouilles*, and compares with the melon, which indicates a round form.

These "squashes," now nearly abandoned in culture, would seem to be synonymous, in some of their varieties at least, with the macock of Virginia and the Virginian watermelon described in Gerarde's Herbal⁷⁷ as early as 1621.

The Perfect Gem Squash, introduced in 1881, seems to belong to this class, and is very correctly figured by Tragus in 1552,⁷⁸ who says they are called *Mala indica*, or in German *Indianisch opffel*, and occur of four colors, saffron yellow, creamy white, orange, and black. He also gives the name *Summer opffel*, which indicates an early squash, and the names *zucco de Syria* and *zucco de Peru*, which indicate a foreign origin. To identify this claimed recent introduction as synonymous with Tragus' *Cucumis, seu zucco marinus* may seem rather improbable. The Perfect Gem and Tragus plant have the following points in common: Fruit of like form and size; so also the leaf, if the proportions between leaf and fruit as figured may be trusted; seed sweet in both; color alike, "Quae candida foris and quae ex pallido lutea sunt poma." The plants are runners in both. Compare also with the description of the Maycock, and it appears to be the same in all but color. A curious instance of survival seems to be here noted, or else the regaining of a lost form through atavism.

⁷⁴ Kalm. Trav., 1748, I., 140.

⁷⁵ Champlain. Voyages. Prince Coll., pp. 64, 75.

⁷⁶ Lahontan. Nouv. Voy., II., 61.

⁷⁷ Gerarde. Herb., 1633, pp. 919, 921.

⁷⁸ Tragus. De Stirpium, 1552, 835.

A careful comparison with the figures and the description given would seem to bring together as synonyms:

Cucumis marinus. Fuchs., 1542, 699; Roszlin, 1550, 116.

Cucumis vel zucco marinus. Trag., 1552, 835.

Cucurbita indica rotunda. Lugd., 1587, I., 116.

Pepo rotundus minor. Dod., 1616, 666.

Pepo minor rotundus. Bodæns, 1644, 783.

Cucurbite folio aspero, sive zucchæ. Icon., IV., Chabr., 1673, 130.

The Maycock. Ger., 1633, 919.

The Perfect Gem, 1881.

The distinctions between the various forms of Cucurbits seem to have been kept in mind by the vernacular writers, who did not use the words pumpkin, gourd, etc., as synonyms. Thus in 1535 Cartier⁷⁹ mentions as found among the Indians of Hochelega, now Montreal, "pompions, gourds." In 1586 Heriot⁸⁰ mentions in Virginia "pompions, melons, and gourds," and Captain John Smith⁸¹ pumpions and macocks; Strachey,⁸² who was in Virginia in 1610, mentions macocks and pumpions as differing. "Pumpions and gourds" are named by Smith⁸³ for New England in 1614. In 1648, at the mouth of the Susquehanna, mention is made of "symnels and maycocks."⁸⁴

The word squash in its early use, we may hence conclude, applied to those varieties of Cucurbits which furnished a summer vegetable, and was carefully distinguished from the pumpkin. Kalm⁸⁵ in the eighteenth century distinguishes between pumpkins, gourds, and squashes. The latter are the early sorts; the gourd includes the late sorts useful for winter supplies; and the pompion or melon, the latter name and contemporary use giving the impression of roundness and size; and Jonathan Carver⁸⁶ soon after gives indication of the confusion now existing in the

⁷⁹ Cartier. Pink. Voy., XII., 656.

⁸⁰ Pink. Voy., XII., 596.

⁸¹ Pink. Voy., XIII., 33.

⁸² Strachey. Trav. into Va., 72.

⁸³ Smith. Desc. of New Eng., II., 16.

⁸⁴ A Description of New Albion. Force Coll., II.

⁸⁵ Kalm. Trav., 1770-1, I., 140.

⁸⁶ Carver. Travels in the Northwest in 1776, p. 211.
Am. Nat.—August.—3.

definition of what constitutes a pumpkin and a squash when he says, "the melon or pumpkin, which by some are called squashes," and he names among other forms the same variety, the crook-neck, or crane-neck as he calls it, which Kalm classed among gourds.

At the present time the word squash is only used in America, gourds, pumpkins, and marrows being the equivalent English name,⁸⁷ and the American use of the word is so confusing that it can only be defined as applying to those varieties of *Cucurbita* which are grown in gardens for table use, while the word pumpkin applies to those varieties grown in fields for stock purposes, and the word gourd to those ornamental forms with a woody rind and bitter flesh, or to the *Lagenaria*.

This class of Cucurbits belongs to *Cucurbita pepo*, Cogn. in in DC. Monog., II., p. 545.

Other forms distinctively known at present as squashes are added in proper sequence.

The form of *Cucurbit* now so generally known as *Bush* or *Summer Squash* is correctly figured in 1673 by Pancovius,⁸⁸ under the name of *Melopepo clypeatus* Tab. What may be the fruit was figured by Lobel⁸⁹ in 1591, and by Dodonæus⁹⁰ in 1616, and similar fruit with the vine and leaf by Dalechamp in 1587,⁹¹ Gerarde⁹² in 1597, Dodonæus in 1616, and by J. Bauhin⁹³ in 1651. By Ray⁹⁴ in 1686 it is called in the vernacular "*The Buckler* or *Simmel-Gourd*." This word cymling or cymbling, in use at the present day in the Southern States for the Scalloped Bush Squash in particular, I find used in 1648 in "A Description of New Albion," but spelled Symnells. Jefferson⁹⁵ wrote the word "cymling." In 1675, Thomson, in a poem entitled *New England's Crisis*, uses the word "cimnel," and distinguishes from

⁸⁷ The Vegetable Garden. Vilmorin-Andrieux. Trans. by W. Robinson. London, 1885.

⁸⁸ Pancovius. Herbarium, 1673, No. 920.

⁸⁹ Lobel, ic., 1591, I., 642.

⁹⁰ Dodonæus. Pempt., 1616, 667.

⁹¹ Hist. Gen. Lugd., 1587, I., 618.

⁹² Gerarde. Herbal, 1597, 774.

⁹³ J. Bauhin. Hist., 1651, II., 224.

⁹⁴ Ray. Hist., 1686, I., 648.

⁹⁵ Jefferson's Notes on Virginia, 1803.

the pumpkin. Whence the origin of the word I find no clue, but it was very possibly of aboriginal origin, as its use has not been transferred to Europe. In England it is called Crown Gourd and Custard Marrow; in the United States generally the Scalloped Squash, from its shape; or locally, cymling or pattypan,—this latter name derived from the resemblance to a crimped pan used in the kitchen for baking cakes. It was first noticed in Europe, so far as I can ascertain, in the sixteenth century, and has the following synonymy:

Cucurbita laciniata. Lugd., 1587, I., 618.

Melopepo latior clypeiformis. Lob., ic., 1591, I., 642.

Pepo maximum clypeatus. Ger., 1597, 774.

Pepo latus. Dod., 1616, 666.

Pepo latiorus fructus. Dod., 1616, 667.

Cucurbita clypeiformis sive Siciliana melopepon latus a nonnullis vocata J. B., 1651, II., 224. (First known to him in 1561.)

Melopepo clypeatus. Pancov., 1653, n. 920.

The Buckler or Simnel-Gourd. Ray., Hist., 1686, I., 648.

Summer Scalloped.

This form belongs to the *Cucurbita melopepo*, Lin. sp., ed. 2, p. 1435, *C. pepo*, Cogn., l.c.

The Bush Crookneck is also called a squash. Notwithstanding its peculiar shape and usually warted condition, it does not seem to have received much mention by the early colonists, and to have escaped the attention of the pre-Linnean botanists, who were so apt to figure new forms. The most we know is that Summer Crooknecks appeared in our garden catalogues in 1828,⁹⁶ and it is perhaps referred to by Champlain in 1605. It is now recommended in France rather as an ornamental plant than for kitchen use.⁹⁷ This form belongs to *Cucurbita pepo* Naudin, Ann. Sc. Nat., Ser. 4, V., 6, p. 29.

The *Winter Crookneck* squash seems to have been first recorded by Ray,⁹⁸ who received the seeds from Sir Hans Sloane and planted them in his garden, and this was the variety now known

⁹⁶ Thorburn's Cat.

⁹⁷ Vilmorin. Les. Pl. Pot., 1883, 184.

⁹⁸ Ray. Hist., 1686, I., 642.

as the Striped. It has apparently been grown in New England from the earliest times, and often attains a large size. Josselyn⁹⁹ refers to a Cucurbit that may be this, the fruit "longish like a gourd," the very comparison made by Ray. Kalm¹⁰⁰ mentions a winter squash in New Jersey called "crooked neck," and Carver¹⁰¹ speaks of "crane-necks" being preserved in the West for winter supply. A sub-variety, the Puritan,¹⁰² answers to Beverley's¹⁰³ description of a form which he calls Cushaw, an Indian name recognizable in the Ecushaw of Heriot, 1586. This form was grown at the New York Agricultural Experiment Station in 1884 from seed obtained from the Seminoles of Florida, and appears synonymous with the Neapolitan, to which Vilmorin applies the French synonym of Courge de la Florida.

This form of squash belongs to *Cucurbita moschata*, Cogn., l.c., p. 546.

The *Pine Apple* squash, in its perfect form, is of a remarkably distinctive character, on account of its acorn-shape and regular projection. As grown, however, the fruit is quite variable, and can be closely identified with the *Pepo indicus angulosus* of Gerarde,¹⁰⁴ and is very well described by Ray¹⁰⁵ in 1686. This variety was introduced in 1884 by Landreth, and, as I am informed, the seed came originally from Chili. It is a winter squash, creamy white when harvested, of a deep yellow at a later period. It belongs to *Cucurbita pepo*, Cogn., l.c.

The *Turban squash* is easily recognized by its special form, to which it is indebted for its name. In France this is classed with the Giravmons, and one of its trivial names is *Citroville iroquoise*. It is possibly the Chilian mamillary Indian gourd of Molina¹⁰⁶ in 1787, described as with spheroidal fruit with a large nipple at the end, the pulp sweet and tasting like the sweet potato. In 1856

⁹⁹ Josselyn. Rar., 89.

¹⁰⁰ Kalm. Trav., 1670, I, 347.

¹⁰¹ Carver. Trav., 1776.

¹⁰² Burr. Field and Gard. Veg., 1863, p. 221.

¹⁰³ Beverley. Hist. of Va., 1705, 124.

¹⁰⁴ Gerarde. Herbal, 1597, 774.

¹⁰⁵ Ray. Hist., 1686, I., 641.

¹⁰⁶ Molina. Hist. of Chili, 1808, I., 93.

Naudin¹⁰⁷ describes Le Turban Rouge, and Le Turban Nouveau du Bresil, the latter of recent introduction from South America. Its description accords with the *Cucurbita clypeiformis tuberoso* and *verrucoso*, seen by J. Bauhin¹⁰⁸ in 1607. The Zapillito, from Brazil, advertised by Gregory in 1880, and said by Vilmorin to have reached France from South America about 1860, resembles the Turban squash in shape. This evidence, such as it is, points to South America as the starting point of this form.

It belongs to *Cucurbita maxima*, Cogn., l.c.

The squashes of our markets, par excellence, are the *Marrows* and the *Hubbard*, with other varieties of the succulent stemmed. These found representation in our seed catalogues in 1828,¹⁰⁹ in the variety called Com. Porter's Valparaiso, and which was brought from Chili shortly after the war of 1812. In the *New England Farmer*, Sept. 11., 1824, notice is made of a kind of melon squash or pumpkin, of moderate size, from Chili, a few seeds being received in Boston, and which is possibly the Valparaiso. The Hubbard squash is said by Gregory, its introducer in 1857, to be of unknown origin, but to resemble a kind which was brought by a sea captain from the West Indies. The *Marblehead*, also introduced by Mr. Gregory and distributed in 1867, is said directly to have come from the West Indies. The *Autumnal Marrow* or *Ohio* was introduced in 1832, and exhibited at the rooms of the Massachusetts Horticultural Society.

This class is to be referred to *Cucurbita maxima*, Cogn., l.c., and does not appear in any of the figures or descriptions of the herbalists, so far as we can ascertain, except as hereinafter noted for Lobel.

The Pumpkin.

The word *pumpkin* is derived from the Greek *pepon*, Latin *pepo*. In the ancient Greek it was used by Galen as a compound to indicate ripe fruit, as *sukuopepona*, ripe cucumber, as also by Theophrastus *peponas*, and Hippocrates *sikuon peponia*.¹¹⁰

¹⁰⁷ Naudin. Ann. Des. Sc. Nat., 4th ser., VI., p. 20.

¹⁰⁸ J. Bauhin. Hist., 1651, II., 227.

¹⁰⁹ Thorburn's Cat.

¹¹⁰ See Bodæus a Stapel. Theoph., 1644, 781.

The word *pepo* was transferred in Latin to large fruit, for Pliny¹¹¹ says distinctly that "*cucumeres*," when of excessive size, are called "*pepones*." By the commentators the word *pepo* is often applied to the melon. Fuchsias¹¹² in 1542 figures the melon under the Latin name *pepo*, German *pfeben*; and Scaliger¹¹³ in 1566, Dalechamp¹¹⁴ in 1587, and Castor Durante¹¹⁵ in 1617 apply this term *pepo* or *pepon* likewise to the melon. The derivatives from the word *pepo* appear in the various European languages, as follows:

Belgian: *pepoenem*, Lob. Obs., 1576; *pompoen*, Marcg., 1648, Vilm., 1883.

English: *pepon*, Lyte, 1586; *pompon*, Lyte, 1586; *pompion*, Ger. 1597; *pumpion*, J. Smith, 1606; *pumpkin*, Townsend, 1726.

French: *pompons*, Ruel., 1536; *pepon*, Dod. Gal., 1559.

Italian: *popone*, Don, 1834.

Swedish: *pumpa*, Tengborg, 1764; *pompa*, Webst. Dict.

In English the word *melon* and *million* was early applied to the pumpkin, as by Lyte in 1586, Gerarde in 1597 and 1633, and by a number of the early narrators of voyages of discovery. Pumpkins were called gourds by Lobel in 1586, and by Gerarde in 1597, and the word gourd is at present in use in England to embrace the whole class, and is equivalent to the French *courge*. In France the word *courge* is given by Matthiolus in 1558, and Pinæus in 1561, and seems to have been used as applicable to the pumpkin by early navigators, as by Cartier in 1535. The word *courge* was also applicable to the *Lagenaria* in 1536, 1561, 1586, 1587, 1597, 1598, 1617, 1651, 1673, 1772, and is now shared with the pumpkin and squash in 1883.

Our earlier travelers and historians often recognized in the pumpkin a different fruit from the *courge*, the gourd, or the melon. Cartier, on the St. Lawrence in 1584 discriminates by using the words "*gros melons, concombres, and courges* 35,"¹¹⁶ or in a

¹¹¹ Pliny, lib. XIX., c. 23, Grandsagne Ed., p. 196.

¹¹² Fuchsius. De Stirp., 1542, 701.

¹¹³ Scaliger. In Lib. de Plant. Arist., 1566, 79, 110.

¹¹⁴ Hist. Gen. Lugd., 1587, I., 623.

¹¹⁵ Castor Durante. Herb. Novo., 1617.

¹¹⁶ Cartier. Bref. Recit., etc., 1545. Reimpr. Tross., 1863.

translation "pompions, gourds, cucumbers."¹¹⁷ In 1586 a French name for what appears to be the summer squash is given by Lyte as *concombre marin*. With this class we may interpret Cartier's names into "gros melons" pumpkins, "concombres" summer squashes, and "courage" winter crooknecks, as the shape and hard shell of this variety would suggest the gourd or *Lagenaria*. In 1586 Heriot, in Virginia,¹¹⁸ names "macokner, according to their several forms, called by us pompions, melons, and gourds, because they are of the like forms as those kinds in England. In Virginia such of several forms are of one taste, and very good, and do also spring from one seed. They are of two sorts: one is ripe in the space of a month, and the other in two months." Heriot apparently confuses all the forms met with with the macock, which, as we have shown in our notes on squashes, appears identical with the type of the Perfect Gem Squash, or the *Cucumis marinus* of Fuchsius. The larger sorts may be his pompions, the round ones his melons, and the cushaw type his gourds, for, as we shall observe, the use of the word pompion seems to include size, and that of gourd, a hard rind. Acosta¹¹⁹ indeed speaks of the Indian pompions in treating of the large-sized fruits. Capt. John Smith,¹²⁰ in his Virginia, separates his pumpions and macocks, both planted by the Indians amongst their corn, and in his description of New England in 1614 speaks of pumpions and gourds. This would seem to indicate that he had a distinction in his mind, and we may infer that the word pompion was used for the like productions of the two localities, and that the word gourd in New England referred to the hard-rind or winter squashes, for Master Graves¹²¹ refers to Indian pompions, Rev. Francis Higginson¹²¹ to pompions, and Wood¹²² to pompions and isquouter-squashes in New England soon after its colonization, and Josselyn¹²³ about the same period names also

¹¹⁷ Cartier. Pink. Voy., XII., 656.

¹¹⁸ Heriot. Pink. Voy., XII., 596.

¹¹⁹ Acosta. Nat. and Mor. Hist. of the Indies, 1604, 264.

¹²⁰ Smith. Va. Pink. Voy., XIII., 33.

¹²¹ Mass. Hist. Soc. Coll., 1st ser., I., 118, 124.

¹²² Wood. New Eng. Prosp., 1st ed., p. II.

¹²³ Josselyn. Rar., 89, 120.

gourds, as quoted in our notes on the squash. Kalm,¹²⁴ about the middle of the eighteenth century, traveling in New Jersey, names "squashes of the Indians," which are a summer fruit, "gourds," meaning the winter crookneck, and "melons," which we may conclude are pumpkins; Jonathan Carver¹²⁵ in 1776 of the melon or pumpkin, called by some squashes, and says the smaller sorts are for summer use, the crane-neck for winter use, and names the large oblong, and in 1822 Woods¹²⁶ speaks of pompons, or pumpions, in Illinois, as often weighing from 40 to 60 lbs.

The common field pumpkin of America is in New England carried back traditionally to the early settlement, and occurs under several forms, which have received names which are usually quite local. Such form-varieties may be tabulated alphabetically, as below as taken from Burr :

Canada. Form oblate. 14 in. diam., 10 in. deep. Deep orange yellow.

Cheese. Flattened. 16 in. diam., 10 in. deep. Deep reddish orange.

Common Yellow. Rounded. 12 in. diam., 14 in. deep. Clear orange yellow.

Long Yellow. Oval. 10 in. diam., 20 in. deep. Bright orange yellow.

Nantucket. Various. 18 in. diam., 10 in. deep. Deep green.

The Canada Pumpkin is of an oblate form inclining to conic, and is deeply and regularly ribbed, and when well grown of comparatively large size. It is somewhat variable in size and shape, however, as usually seen. We think we are justified in the following synonymy :

Cucurbitæ indianæ and peregrinæ. Pin., 1561, 191.

Cucurbita indica, rotunda. Lugd., 1587, I., 616.

Pepo rotundus compressus melonis effigie. Lob. Obs., 1576, 365; ic., 1591, I., 642.

(?) *Pepo indicum minor rotundum.* Ger., 1597, 774.

¹²⁴ Kalm. Trav., 1770, .., 140, 347.

¹²⁵ Carver. Trav., 1776, 211.

¹²⁶ Woods. Illinois Country, 122.

Pepo silvestris. Dod., 1616, 668.

Melopepo. Tourn., 1719, t. 34.

Canada Pumpkin. Vermont Pumpkin.

Cheese Pumpkin. Fruit much flattened, deeply and rather regularly ribbed, broadly dishing about cavity and basin. Varies somewhat widely in the proportional breadth and diameter.

Melopepo compressus alter. Lob. ic., 1591, I., 643.

Pepo maximus compressus. Ger., 1597, 774.

Cucurbita genus, sive Melopepo compressus alter, Lobelio. J. B., 1651, II., 266.

Large Cheese. Fessenden, 1828; Bridgeman, 1832.

Cheese.

This variety, says Burr, was extensively disseminated in the United States at the time of the American Revolution, and was introduced into New England by returning soldiers.

Common Yellow Field. Fruit rounded, a little deeper than broad, flattened at the ends, rather regularly and more or less prominently ribbed.

Cucurbita indica. Cam. Epit., 1586, 293.

Melopepo teres. Lob. ic., 1591, I., 643.

Pepo maximus rotundus. Ger., 1597, 773.

Cucurbita aspera, Icon. I. J. B., 1651, II., 218.

Cucurbita folio aspero, zucha. Chabr., 1673, 130.

Common Yellow Field Pumpkin.

Long Yellow. Fruit oval, much elongated, the length nearly or often twice the diameter, of large size, somewhat ribbed, but the markings less distinct than those of the Common Yellow.

Cucumis Turcicus. Fuch., 1542, 698.

Melopepo. Roszlin, 1550, 116.

Pepo. Tragus, 1552, 831.

Cucurbita indica longa. Lugd., 1587, I., 617.

Pepo maximus oblongus. Ger., 1597, 773.

Pepo majer oblongus. Dod., 1616, 635; Bodæus, 1644, 782.

Cucurbita aspera, Icon. II. J. B., 1651, II., 218.

Cucurbita folio aspero, zucha. Chabr., 1673, 130.

Long Yellow Field Pumpkin.

The "*Jurumu Lusitanus Bobora*" of Marcgravius¹²⁷ and Piso¹²⁸ would seem to belong here, except for the leaves, but the figure is a poor one.

These forms we have just mentioned have all that something in their common appearance that at once expresses a close relationship, and to the casual observer does not express differences.

We now pass to some other forms also known as pumpkins, but to which the term squash is sometimes applied.

The Nantucket Pumpkin occurs in various forms under this name, but the form I refer to, and of which I have examined specimens, belongs to *Cucurbita pepo*, Cogn. l. c., and is of an oblong form, swollen in the middle and indistinctly ribbed. It is covered more or less completely with warty protuberances, and is of a black green color when ripe, becoming mellowed toward orange in spots by keeping. It seems closely allied to the *Courge Sucrière du Bresil* of Vilmorin. It is not the *Cucurbita verrucosa* of Dalechamp, 1587, nor of J. Bauhin, 1651, as in these figures the leaves are represented as entire, and the fruit as melon-formed and ribbed.

In 1884 there appeared in our seedsmen's catalogues, under the name of Tennessee Sweet Potato Pumpkin, a variety very distinct, of medium size, pear-shape, little ribbed, of a creamy white striped with green color, and the stem swollen and fleshy. Of its history I have ascertained nothing, but it bears a quite strong likeness in shape to a tracing of a piece of "pumpkin" pottery exhumed from the Western mounds, and sent me by Lucien Carr, connected with the museum at Cambridge, Mass. In Lobel's history, 1576, and in his plates, 1591, appear figures of a plant which in both leaf and fruit represents fairly well our variety; and these figures are of interest as being the only ones I have yet found in the ancient botanies which represents a fruit with a swollen herbaceous stem. I think I am justified in the following synonymy:

Pepo oblongus vulgatissimus. Lob. Obs., 1576, 365.

Pepo oblongus. Lobel, ic., 1591, I., 641.

Tennessee Sweet Potato Pumpkin.

¹²⁷ Piso. Hist. Nat. Bras., 1648, 44.

¹²⁸ Piso. De Ind., 1658, 264.

A quite numerous series of pumpkins are known to our seedsmen's catalogues, and some of a form quite distinct from those here noticed, but I have not as yet sufficiently studied these so as to form an opinion. I think, however, that much may be yet learned through the examination of quite complete sets of varieties within each of the three described species of *Cucurbita* which furnish fruits for our consumption. Notwithstanding the ready crossings which are so apt to occur within the ascribed species, there yet seems to exist a permanency of types which is simply marvellous, and which would seem to lend countenance in the belief that there is a need of a revision of the species, and a closer study of the various groups or types which appear to have remained constant during centuries of cultivation.

If we consider the stability of types, and the record of variations that appear in cultivated plants, and the additional fact that so far as determined the originals of cultivated types have their prototype in nature,¹²⁹ and are not the products of culture, it seems reasonable to suppose that the record of the appearance of types will throw light upon the country of their origin. From this standpoint, we may hence conclude that, as the present types have all been recorded in the Old World since the fifteenth century, and were not recorded before the fourteenth and succeeding centuries, there must be a connection between the fact of the discovery of America, and the fact of the appearance of pumpkins and squashes in Europe.

The Gourd.

The word gourd is believed to be derived from the Latin *curcubita*, but it takes on various forms in the various European languages. It is spelled *gowrde* by Turner in 1538, *gourde* by Lobel in 1576, and *gourd* by Lyte in 1586. In France it is given as *courgen* and *cohurden* by Ruellius in 1536, but appears in its present form, *courge*, in Pinaeus, 1561. Dalechamp used *coucourde* in 1587, a name which now appears as *cougourde* in

¹²⁹ See A Study of the Dandelion. AM. NAT., Jan., 1886.

See History of Celery. AM. NAT., July, 1886.

See A Study in Agr. Botany. Proc. of the Soc. for Prom. of Agr. Sc., 1886.

See History of the Currant. Trans. of West N. Y. Hort. Soc.

Vilmorin. The Belgian name appears as *cauwoord* in Lyte, 1586; and the Spanish name, *calabassa*, with slight change of spelling, has remained constant from 1561 to 1864, as has the *zucca* of the Italians and the *kurbs* of the Germans.

The *lagenaria* is but rarely cultivated in the United States, except as an ornamental plant, and as such shares a place with the small hard-shelled cucurbita which are known as fancy gourds. In some localities, however, under the name of sugar trough gourd, a *lagenaria* is grown for the use of the shell of the fruit for the purposes of a pail; and what is worthy of note, this type of the fruit does not exactly appear in the drawings of the botanists of the early period, nor in the seed catalogues of Europe at the present time. In the Tupi Dictionary of Father Ruiz de Montaga,¹³⁰ 1639, among the gourd names are "iacvi-gourd, like a great dish or bowl," which may mean this form. When we examine descriptions, this gourd may be perhaps recognized in Columella's account, "Sive globosi corporis, atque utero minium quae vasta tumescit,"¹³¹ and used for storing pitch or honey; yet a reference to his prose description¹³² rather contradicts the conjecture, and leads us to believe that he only describes the necked form, and this form only seems to have been known to Palladius.¹³³ Pliny¹³⁴ describes two kinds, the one climbing, the other trailing. Walafrius Strabo,¹³⁵ in the ninth century, seems to describe the *plebeia* of Pliny as a cucurbita, and the *cameraria* as a pepo; the former apparently a necked form, and the latter one in which the neck has mostly disappeared, leaving an oval fruit. Albertus Magnus,¹³⁶ in the thirteenth century, describes the cucurbita as bearing its seed "in vase magno," which implies the necked form. The following types are illustrated in the various herbalists which I have in my library:

¹³⁰ Quoted by Gray and Trumbull, *Am. Jour. of Sci.*, May, 1883, 372.

¹³¹ Columella. Lib. X., c. 383.

¹³² Columella. Lib. XI., c. 3.

¹³³ Palladius. Lib. IX., c. 9.

¹³⁴ Pliny. Lib. XIX., c. 24.

¹³⁵ Walfridus Strabo. Hortulus in Macer Floridus, Ed. of Silling., 1832, pp. 146, 147.

¹³⁶ Albertus Magnus. Jessen Ed., 1867, 500.

- I. *Cucurbita oblonga*. Fuchs., 1542, 370.
Cucurbita plebeia. Roszlin, 1550, 115.
Cucurbita. Trag., 1552, 824.
Cucurbita longa. Cardanus, 1556, 222.
Cucurbita. Matth., 1558, 261; Pinaeus, 1561, 190; Cam. Epit., 1586, 292.
Cucurbita sive zuccha, omnium maxima anguina. Lob. Obs., 1576, 366; ic., 1591, I., 644.
Cucurbita cameraria longa. Lugd., 1587, I., 615.
Cucurbita anguina. Ger., 1597, 777.
Cucurbita oblonga. Matth., 1598, 392.
Cucurbita longior. Dod., 1616.
Zucca. Castor Durante, 1617, 488.
Cucurbita anguina longa. Bodaeus, 1644, 784.
Cucurbita longo, folio molli, flore albo. J. Bauh., 1651, II., 214; Chabr., 1673, 129.
Courge massue tres longue. Vilm., 1883, 190.
Club Gourd.
- II. ———. Ruellius frontispiece, 1536.
Cucurbita minor. Fuch., 1542, 369.
Cucurbita. Trag., 1552, 824; Matth., 1558, 261; Cam. Epit., 1586, 292.
Cucurbita marina. Cardan, 1556, 222.
Cucurbita lagenaria. Lob. Obs., 1576, 366; ic., 1591, I., 644; Matth., 1598, 393.
Cucurbita cameraria. Lugd., 1587, I., 615.
Cucurbita lagenaria sylvestris. Ger., 1597, 779.
Cucurbita prior. Dod., 1616, 668.
Zucca. Cast. Dur., 1617, 488.
Courge pelerine. Vilm., 1883, 191.
Bottle Gourd.
- III. *Cucurbita calebasse*. Tourn., 1719, t. 36.
Courge siphon. Vilm., 1883, 190.
Dipper Gourd.
- IV. *Cucurbita major*. Fuchs., 1542, 368.
Cucurbita cameraria. Roszlin, 1550, 115.
Cucurbita. Tragus, 1552, 824; Matth., 1558, 261.

Cucurbita cameraria major. Lugd., 1587, I., 616.

Cucurbita lagenaria. Ger., 1597, 777.

Cucurbita major sessilis. Matth., 1598, 393.

Cucurbita lagenaria rotunda. Bodaeus, 1644, 784.

Cucurbita latior, folio molli, flore albo. J. Bauh., 1651, I., 215 ; Chabr., 1673, 129.

Sugar Trough Gourd.

V. *Cucurbita.* Matth., 1558, 261 ; Lugd., 1587, I., 615.

Courge plate de corse. Vilm., 1883, 191.

This classification, it is to be remarked, is not intended for exact synonymy, but to represent the like types of fruit-form. Within these classes there is a wide variation in size and proportion.

Whether these lagenaria existed in the new world before the discovery by Columbus, as great an investigator as Gray¹³⁷ considers as worthy of examination, and quotes Oviedo for the period about 1526, as noting the long and round or banded, and of all the shapes they usually have in Spain, as much used in the West Indies and Terra Firma for carrying water, and indicates that there are varieties of spontaneous growth as well as those under cultivation. The occurrence, however, of the so-called fancy gourds of the *Cucurbita pepo* species, of hard rind, of gourd shape, and often of gourd bitterness, renders difficult the identification of species through the uses. The relation of the voyage of Amerigo Vespucci,¹³⁸ 1489, mentions the Indians of Trinidad and of the coast of Paria as carrying about their necks small dried gourds filled with the plant they are accustomed to chew, or with a certain whitish flour ; but these records might as well be made from the *Cucurbita pepo* gourds as from the lagenaria gourds. The further mention that each woman carried a cucurbita of water might seem to refer to gourds. Acosta¹³⁹ speaks of the Indians of Peru making floats of gourds, for swimming, and says : " There are a thousand kinds of Calebasses ; some are so deformed in their bigness that of the rind cut in the

¹³⁷ Gray and Trumbull. *Am. Jour. of Sci.*, May, 1883, 370.

¹³⁸ Quoted from Gray and Trumbull, l. c.

¹³⁹ Acosta. *Hist. of Indies*, Eng. Ed., 1604, 177, 238.

midst and cleansed, they make as it were, baskets to put in all their meat, for their dinner ; of the lesser, they make vessels to eat and drink in," etc. Bodaeus' ¹⁴⁰ quotation, in Latin, reads differently in a free translation : " They grow in the province of Chili to a wonderful size, and are called *capallas*. They are of an indefinite number of kinds ; some are monstrous in their immense size, and when cut open and cleaned, furnish various vessels. Of the smaller they most ingeniously make cups and saucers." In 1624 Bodaeus received from the West Indies some seed which bore fruit " quae humanum crassitudinem and longitudinem superaret," which fully justifies Acosta's idea of size. The Anonymous Portugal of Brasil ¹⁴¹ says : " Some pompions so big that they use them for vessels to carry water, and they hold two pecks or more." Baro ¹⁴² in 1647 also speaks of " Courges and calebasses si grandes and profondes qu'elles servent comme de magazin," and Laet ¹⁴³ mentions " Pepones tam vastae, ut Indigenae iis utantur pro vasis quibus aquam aggerunt." These large-sized gourds were not, however, confined to America. Bodaeus, as we have noted, grew fruits deformed in their bigness, to use Acosta's term, from West Indian seed, and Cardanus ¹⁴⁴ says he has seen gourds (for he gives a figure which is a gourd) weighing 80 and 122 lbs. ; Bauhin ¹⁴⁵ records the club gourd as sometimes three feet long, Ray ¹⁴⁶ as five or six feet long, and Forskal ¹⁴⁷ the bottle gourd as 18 inches in diameter. These records of size are all, however, of a date following the discovery of America, and the seed of these large varieties might have come from American sources, as is recorded in one case by Bodaeus.

The gourd is of old world origin, for water-flasks of the lagenaria have been found in Egyptian tombs of the twelfth

¹⁴⁰ Bodaeus a Stapel. Theophrastus, 1644, 784.

¹⁴¹ Anonymous Portugal of Brasil. Purchas, Lib. 7, c. I., p. 1310. Quoted from Sloane's Cat., 1696, 100.

¹⁴² Baro in Morisot, p. 294. Quoted from Sloane's Cat., 1696, 100.

¹⁴³ Laet, Lib. 15, c. 10, p. 566. Quoted from Sloane's Cat., 1696, 100.

¹⁴⁴ Cardanus. De Rerum Varietate, 1556, 222.

¹⁴⁵ Bauhin. Pin., 1623, 313.

¹⁴⁶ Ray. Hist., 1686, I., 638.

¹⁴⁷ Forskal. Fl. Ægypt—Arab., 1775, 167.

dynasty, or 2200 to 2400 years B.C.,¹⁴⁸ and they are described by the ancient writers. That the gourd reached America at an early period, perhaps preceding the discovery,¹⁴⁹ we cannot doubt, for Marcgravius notes a cucurbit with a white flower, and of lagenarian form, in Brazil in 1648;¹⁵⁰ but there is not sufficient evidence, so it seems to us, to establish its appearance in America before brought by the colonists. What the calabazas were which served for water-vessels, and were apparently of considerable size, we can at present but surmise. It is possible that there are varieties of *Cucurbita pepo* not yet introduced to notice that would answer the conditions. It is also less possible that gourd-shaped clay vessels might have been used, and thus recorded by not over-careful narrators as gourds. In 1595, Mendana, on his voyage to the Solomon Islands, saw "Spanish pumpkins"¹⁵¹ at the islands of Dominica and Santa Cruz, or according to another translation,¹⁵² "pumpkins of Castille." It would seem by this reference that, whether the "calabaza" of the original Spanish referred to gourds or pumpkins, it did not take many years for this noticeable class of fruits to receive a wide distribution, and it might further imply that Mendana, setting forth from the western coast of America, discriminated between the American pumpkin, or pumpkin proper, and the Spanish pumpkin or gourd.

¹⁴⁸ Schweinfurth. *Nature*, Jan. 31, 1883, 314.

¹⁴⁹ Fruits of the lagenaria are at present carried to the coast of Iceland by ocean currents.

¹⁵⁰ Piso. *Hist. Nat. Bras.*, 1648, 44.

¹⁵¹ Mendana. *Dalrymple, Voy.*, I., 72, 88.

¹⁵² De Morga. *Phillipine Is.*, Hak. Soc., Ed. 68, 70.